Distributed by:

JAMECO® ELECTRONICS

www.Jameco.com ✦ 1-800-831-4242

The content and copyrights of the attached material are the property of its owner.

Quality Engineering Test Report

SERIES: S-40 **40W AC-DC SINGLE OUTPUT SWITCHING POWER SUPPLY**

SAMPLE: A.S-40-5 5V / 8A
B.S-40-12 12V / 3.5A
C.S-40-15 15V / 2.8A
D.S-40-24 24V / 1.8A

NO	TEST ITEM	TEST CONDITION / SPECIFICATION	RESULT	VERDICT
1	AC INPUT VOLTAGE RANGE	I/P : TESTING SPEC : 85~264VAC O/P : FULL LOAD	A:62VAC~267VAC	P
2	LINE REGULATION	I/P : 85~264VAC SPEC : O/P : FULL LOAD A: ±0.5% B: ±0.5% C: ±0.5% D: ±0.5%	A: 0% ~ 0% B: 0% ~ 0% C: -0.04% ~ 0.04% D: -0.02% ~ 0%	P
3	LOAD REGULATION	I/P : 230VAC SPEC : O/P : MIN. TO FULL LOAD A: ±1% B: ±0.5% C: ±0.5% D: ±0.5%	A: -0.18% ~ +0.18% B: -0.05% ~ +0.05% C: -0.04% ~ +0% D: -0.02% ~ +0%	P
4	OUTPUT VOLTAGE TOLERANCE	I/P : 85~264VAC SPEC : O/P : 0% TO FULL LOAD A: ±2% B: ±1% C: ±1% D: ±1%	A: -0.14% ~ +0% B: -0.05% ~ +0% C: -0.08% ~ -0.16% D: -0.10% ~ +0.05%	P
5	RIPPLE&NOISE	I/P : 230VAC SPEC : O/P : FULL LOAD A: 75mV B: 100mV C: 100mV D: 100mV	A: 4mV B: 3mV C: 3mV D: 3mV	P
6	AC INPUT CURRENT	I/P : 230VAC SPEC : 0.6A O/P : FULL LOAD	A:0.54A	P
7	MAX. INRUSH CURREN	I/P : 230VAC SPEC : 60A O/P : FULL LOAD	A:35A	P
8	O/P VOLTAGE ADJ.RANGE	I/P : 230VAC SPEC : O/P : MIN. LOAD A: -5%~+10% B: -10%~+10% C: -10%~+10% D: -10%~+10%	A: 4.49V~5.80V B: 10.03V~14.63V C: 12.43V~17.42V D: 12.43V~17.42V	P
9	SET UP TIME	I/P : 230VAC SPEC : 300mS O/P : FULL LOAD	A: 241mS	P
10	HOLD UP TIME	I/P : 230VAC SPEC : 60mS O/P : FULL LOAD	A: 87mS	P
11	EFFICIENCY	I/P : 115VAC SPEC : O/P : FULL LOAD A:72% B:76% C:76% D:78%	A:72.84% B:76.63% C:76.21% D:78.64%	P
12	OVER LOAD PROTECTION	I/P : 115VAC SPEC : 105%~150% O/P : TESTING	A:142.5% B:145% C:140.7% D:138.3%	P

NEXT

<table>
<tr><th>NO</th><th>TEST ITEM</th><th>TEST CONDITION / SPECIFICATION</th><th>RESULT</th><th>VERDICT</th></tr>
<tr><td>13</td><td>OVER VOLTAGE PROTECTION</td><td>I/P : 230VAC SPEC : 115%~135%
O/P : FULL LOAD</td><td>A : 121%
B : 122%
C : 123%
D : 115%</td><td>P</td></tr>
<tr><td>14</td><td>GROUND LEAKAGE CURRENT</td><td>I/P : 240VAC SPEC :
L-FG--<1mA
N-FG--<1mA</td><td>A: L-FG : 0.87mA
N-FG : 0.88mA</td><td>P</td></tr>
<tr><td>15</td><td>INSULATION RESISTANCE</td><td>SPEC : I/P-O/P : 500VDC/100M Ohms MIN.
I/P-FG : 500VDC/100M Ohms MIN.
O/P-FG : 500VDC/100M Ohms MIN.</td><td>A: O/P-FG >100M Ohms
I/P-O/P >100M Ohms
I/P-FG >100M Ohms</td><td>P</td></tr>
<tr><td>16</td><td>DIELECTRIC / WITHSTAND VOLTAGE</td><td>SPEC : I/P- O/P : 3KVDC/ 1 min. (10mA CUT-OFF)
I/P - FG : 1.5KVDC/ 1 min. (10mA CUT-OFF)
O/P - FG : 0.5KVDC/ 1 min. (10mA CUT-OFF)</td><td>A: I/P-O/P : 4.18mA
I/P-FG : 6.54mA
O/P-FG : 2.50mA</td><td>P</td></tr>
<tr><td rowspan="2">17</td><td rowspan="2">EMS TEST</td><td>EFT TEST:
EN50082-1 IEC1000-4-4</td><td>D: CRITERIA A OK</td><td>P</td></tr>
<tr><td>SURGE TEST:
EN50082-1 IEC1000-4-5</td><td>D: CRITERIA A OK</td><td>P</td></tr>
<tr><td>18</td><td>BURN-IN TEST</td><td>I/P: 230VAC O/P: FULL LOAD
TA:23.3°C BURN-IN DURATION : 1.5 hrs</td><td>A:NON BREAK</td><td>P</td></tr>
<tr><td>19</td><td>ENVIRONMENT TEST (SAMPLE A:)</td><td>HIGH AMBIENT TEMPERATURE FULL LOAD TEST
I/P : 230VAC O/P : FULL LOAD
AMBIENT TEMPERATURE : 41.5°C</td><td>AFTER 18.5 hrs
NON BREAK</td><td>P</td></tr>
<tr><td>20</td><td>TEMPERATURE RISE TEST T rise OF PARTS</td><td colspan="2">A: I/P : 230VAC AFTER 1.5 hr BURN-IN
O/P : FULL LOAD TA : 23.3°C
<table>
<tr><th></th><th>POSITION</th><th>P/N</th><th>TEMP</th><th>T rise</th></tr>
<tr><td></td><td>BD1</td><td>BRIDGE DIODE</td><td>76°C</td><td>52.7°C</td></tr>
<tr><td></td><td>Q1</td><td>MAIN TRANSISTOR</td><td>69.4°C</td><td>46.1°C</td></tr>
<tr><td></td><td>T1</td><td>MAIN TRANSFORMER</td><td>85.1°C</td><td>61.8°C</td></tr>
<tr><td></td><td>D3</td><td>O/P DIODE</td><td>60.3°C</td><td>37°C</td></tr>
<tr><td></td><td>C21</td><td>O/P FILTER CAPACITOR</td><td>61.6°C</td><td>38.3°C</td></tr>
<tr><td></td><td>C5</td><td>I/P FILTER CAPACITOR</td><td>71.8°C</td><td>48.5°C</td></tr>
<tr><td></td><td>LF1</td><td>I/P FILTER TRANSFORMER</td><td>48.4°C</td><td>25.1°C</td></tr>
<tr><td>*</td><td>D1</td><td>FLY DIODE</td><td>93°C</td><td>69.7°C</td></tr>
</table></td><td>*NOTE1</td></tr>
<tr><td>21</td><td>LIFE CYCLE</td><td colspan="2">A: SUPPOSE C21 IS THE MOST CRITICAL COMPONENT
I/P : 230VAC O/P : FULL LOAD Ta : 25 °C Tc21 : 63.3°C Life: 85979hrs
I/P : 230VAC O/P : FULL LOAD Ta : 45 °C Tc21 : 77.3°C Life: 32580hrs</td><td>P</td></tr>
<tr><td>221</td><td>CRITICAL COMPONENT RECORD (FOR QC INSPECTION REFERENCE ONLY)</td><td colspan="3">A: FUSE : 3A/250V
BRIDGE DIODE : D3SB60
LINE FILTER : TF096C1 EE-25
TRANSFOMER : TF147-1-R1 EER-28L
POWER SWITCHER : 2SK727 TO-3P
OUTPUT DIODE : CTB-34 TO-3P
OUTPUT CAPACITOR : ELNA 2200uF/10V RJH 105 °C
INPUT CAPACITOR : JAMICON 100uF/400V LP 85 °C
P.C.B : S-40N-R4 CEM-1 2 OZ SS</td></tr>
<tr><th>DATE</th><th>SAMPLE</th><th>TEST RESULT</th><th>TEST</th><th>APPROVAL</th></tr>
<tr><td>980427</td><td>S-40</td><td>NOTE1:Working temperature > = 45°C output should derating</td><td>H.C.LIOU</td><td>Max Lin</td></tr>
<tr><td>990507</td><td>S-40-24</td><td>PASS</td><td>H.C.LIOU</td><td>Max Lin</td></tr>
</table>

PREVIOUS